

**Notice of Allowability**

Application No.

10/827,239

Examiner

Terry L. Englund

Applicant(s)

WHITTAKER, EDWARD J.W.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amdt/Dwgs (Aug 2, 2006), and Interview (Aug 16, 2006).
2. ☒ The allowed claim(s) is/are 1-2, 4-5, and 7-17 (now renumbered for printing purposes).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 20060816.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

TIMOTHY P. CALLAHAN  
SUPERVISORY PATENT EXAMINER

### EXAMINER'S AMENDMENT

An extension of time under 37 CFR 1.136(a) is required in order to make an examiner's amendment which places this application in condition for allowance. During a telephone conversation conducted on Aug 16, 2006, the applicant's representative David Zibelli (Reg. No. 36,394 requested an extension of time for 1 MONTH and authorized the Director to charge Deposit Account No. 11-0600 the required fee of \$60.00 for this extension and authorized the following examiner's amendment. Should the changes and/or additions be unacceptable to the applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Paragraph 0039, line 7 (see page 7 of the Aug 2<sup>nd</sup> amendment): changed "sixth and seventh" to --seventh and sixth--;

Claim 1, line 15: added a comma after "a first base terminal";

line 16: added a comma after "port";

line 19: added a comma after "the first base terminal";

line 20: added a comma after "path";

line 24: added --bias-- prior to "current path";

Claim 5, line 3: added a comma after "the first base terminal";

line 5: added a comma after "path";

Claim 7, line 1: added --bias-- prior to "current path";

line 4: added --bias-- prior to "current path";

Claim 8, line 1: changed "claim 1" to --claim 7--;

line 5: changed “a source” to --the drain terminal--;

line 6: changed “one of coupled to or resistively” to --being--;

Claim 10, line 2: changed “are PFETs” to --is a PFET--;

Claim 13, line 2: changed both occurrences of “third” to --first--;

line 3: changed “third” to --first--;

line 4: changed both occurrences of “third” to --first--;

Claim 17, line 3: changed both occurrences of “third” to --first--; and

line 4: changed “third” to --first--.

All of the above changes are considered related to inadvertent type oversights, and do not affect the scope of the claims. The reasoning behind these changes will now be described.

To ensure the first and second load resistors (i.e. R1/R2) correspond to their respective seventh and sixth transistor (i.e. Q3/Q4) as shown within Fig. 4a, the applicant's amended paragraph was modified. Commas were added to claims 1 and 5 to minimize possible confusion with respect to what is actually coupled to the current mirror ports (claim 1), or load current path (claim 5). For example, on lines 14-15 of claim 1, the previous phrasing “a first bipolar transistor having a first base terminal and one of a first collector terminal and first emitter terminal coupled with the first current mirror port” could imply that port is coupled to both the base terminal and one of the other terminals. [However, when viewing the applicant's Fig. 2, the base, collector, and emitter terminals of first bipolar transistor Q1 are coupled to the base terminal of second bipolar transistor Q2; first current mirror port 205b, and second supply voltage port 200b, respectively. Therefore, port 205b is coupled to only one of the first bipolar transistor's terminals.] The term --bias-- was added to claims 1 and 7 to clearly distinguish “a current path”

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(claim 1, line 24), and “the current path” (claim 7, lines 1 and 4), from claim 1’s “load current path” (i.e. lines 12, 13, and 20). Without this change, “the current path” of claim 7 could possibly refer to either one of the current paths cited within claim 1. The dependency of claim 8 was changed to clearly provide a first FET (cited claim 7) within the claim’s chain of dependency, thus providing support for claim 8’s use of “second FET”, and claim 10’s use of “the first FET.” For example, if a claim cites either a second FET, or “the first FET”, both of those limitations imply a first FET that should be clearly cited or identified within the claim itself, or at least within the claim’s chain of dependency). In claim 8, “a source” on line 5 was changed for two reasons: 1) to provide consistent labeling with respect to how the source and drain were previously identified (i.e. lines 3-4 both identify the drain and source with “second” and “terminal”), and 2) from the applicant’s Fig. 3, the second FET M2’s source terminal is actually coupled to first supply voltage port Vcc/300a, whereas its drain terminal is actually coupled to second current mirror port 305a, as well as to the first base terminal of first bipolar transistor Q1 (via capacitor 341 and resistors 332-333). Claim 8, line 6 was modified to minimize confusion with what “one of coupled to or resistively coupled to” possibly meant. For example, whether something is resistively, and/or capacitively, coupled to something, it is still “coupled to” it. The phrasing “are PFETs” in claim 10 was amended to provide corresponding syntax for the “at least one of” phrase added by the Aug 2<sup>nd</sup> amendment. The changes made to both claims 13 and 17 correspond to the applicant’s change of “third” to --first-- within claim 7.

### **RESPONSE TO AMENDMENT/DRAWINGS**

The amendment and drawings submitted on Aug 2, 2006 were carefully reviewed and considered with the following results:

The Replacement Sheets overcame the various objections to the drawings described in the previous Office Action. Therefore, those objections have been withdrawn.

The Abstract replacement overcame the previous Abstract's objection, which has also been withdrawn.

The amended paragraph overcame all the objections described on pages 7-9 of the previous Office Action. Although those objections have been withdrawn, one amended change to paragraph 0039 created a new objection. However, that was addressed/corrected by the Examiner's Amendment described above.

Cancelled claim 6 rendered its objection moot.

Amended claims 1, and 8-9 overcame the objections to claims 1-2, 4-5, and 7-17 as described in the previous Office Action, and those claim objections have now been withdrawn. Although some other concerns were noted within the claims when they were reviewed, those were also addressed/corrected by some of the changes described in the Examiner's Amendment.

Most of the rejections of claims under 35 U.S.C. 112 described in the previous Office Action were overcome by the amended claims. However, the rejections of claims 8 and 13 were either not addressed, or addressed satisfactorily. Those rejections, along with several other concerns noted within the claims, were all addressed/corrected by the Examiner's Amendment described above. Therefore, all of the rejections of claims 7-17 under 35 U.S.C. 112, as described in (or related to) the previous Office Action, have now been withdrawn.

Amended claim 1 overcame the rejection of claims 1-2, 4-5, and 8-10 under 35 U.S.C. 103(a), with respect to Akioka et al. Therefore, those claim rejections have all been withdrawn. Akioka et al. does not clearly show or disclose the current path between the first supply voltage

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port and the coupled first/second base terminals as now recited within claim 1. This limitation came from dependent claim 6 (now cancelled), which was identified in the previous Office Action as being objected to only.

There are no known objections or rejections remaining within the present application.

### **REASONS FOR ALLOWANCE**

The following is an examiner's statement of reasons for allowance:

None of the prior art references reviewed and considered shows or discloses a circuit as recited within independent claim 1. More specifically, although various references show/disclose a circuit comprising first/second supply voltage ports, a current mirror circuit with first/second current mirror ports, and a current ratioing circuit with first/second portions and first/second bipolar transistors with their basic relationships, none of the references clearly shows or discloses a current path between the first supply voltage port and the first/second base terminals as now recited within claim 1, upon which claims 2, 4-5, and 17-17 depend. Since there is no strong motivation to modify or combine any prior art reference(s) to ensure the circuit also comprises that current path, the claims are deemed patentably distinct over the prior art of record.

Claims 1-2, 4-5, and 7-17 are allowed, and have been renumbered as claims 1-2, 6-11, 3-4, 12-13, 5, and 14-15, respectively for printing purposes. The renumbering takes into account the cancellation of claims 3, 6, and 18-20, and also regroups related claims closer together. For example, claims 11-12, and 15 depend on claim 2; and claims 8-10, 13-14, and 16-17 all depend on claim 7, wherein claims 2, 4-5, and 7 all depend only on independent claim 1.

Any comments considered necessary by the applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication, or previous communications, from the examiner should be directed to Terry L. Englund whose telephone number is (571) 272-1743.

The examiner can normally be reached Monday-Friday from 7 AM to 3 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (571) 272-1740.

The new central official fax number is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1562.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Terry L. Englund

17 August 2006







Replacement Sheet

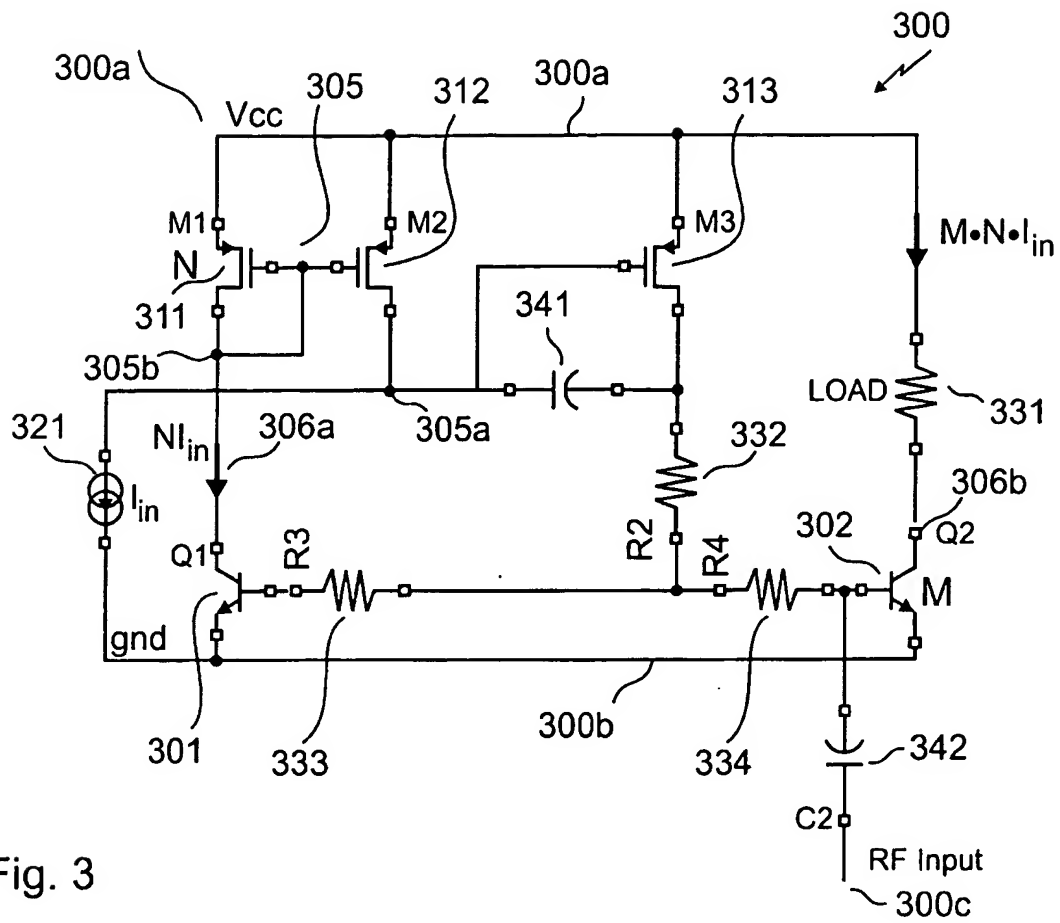


Fig. 3